SUPPORT FOR THE AMENDMENTS

Newly-added Claims 50-65 are supported by the specification and the original claims.

Independent Claim 50 is based on Claims 27 and 32-34. Independent Claim 56 us based on Claims 39, 40 and 41. Independent Claim 62 is based on 40, 41 and 46.

Claims 54 and 55 correspond to Claims 37 and 38. Claims 60 and 61 correspond to Claims 44 and 45.

No new matter is believed to have been added to the present application by the amendments submitted above.

REMARKS

Claims 50-65 are pending. Favorable reconsideration is respectfully requested.

The present invention relates to methods of improving one or more of the following mechanical properties of a polyolefin composition: (1) low-speed mechanical behavior, (2) operating temperature range, and (3) change in the mechanical behavior over time. See independent Claims 50, 56 and 62.

In each case, this is achieved by the combination of at least one unmodified polypropylene homopolymer (P1) and at least one modified propylene homopolymer (P2), modified by grafted acid and/or anhydride groups.

Claim 50 specifies that the unmodified polypropylene homopolymer (P1) is added to a polyolefin composition (C2) which contains the modified polypropylene homopolymer (P2).

Claim 56 specifies that the modified propylene homopolymer (P2) is added to a polyolefin composition (C1) which contains the unmodified propylene homopolymer (P1).

Claim 62 specifies combining the modified propylene homopolymer (P2) with the unmodified propylene homopolymer (P1), to produce a polyolefin composition (C1).

Each of those claims also specifies that at least one mechanical property is improved.

In Claim 50, this is expressed as an improvement as compared to:

(a) the polyolefin composition (C2) prior to the addition of the at least one unmodified polypropylene homopolymer (P1) and

(b) a polyolefin composition (C1) obtained by replacing, weight for weight in the polyolefin composition (C2), all the modified polypropylene homopolymer (P2) by at least one unmodified polypropylene homopolymer (P1).

In Claim 56, this is expressed as an improvement as compared to:

(a) the polyolefin composition (C1) prior to the addition of the at least one modified propylene homopolymer (P2) and

(b) a polyolefin composition (C2) obtained by replacing, weight for weight, in the polyolefin composition (C1), all the modified unmodified propylene homopolymer (P1) by at least one modified propylene homopolymer (P2) .

In Claim 62, this is expressed as an improvement as compared to the mechanical property of the polyolefin composition (C1) and with respect to that of the mechanical property of a polyolefin composition (C2) obtained by replacing, weight for weight, in the polyolefin composition (C1), all the unmodified propylene homopolymer (P1) by the at least one modified propylene homopolymer (P2).

The rejections of the claims under 35 U.S.C. §102(b)/§103(a) over Ding et al. is respectfully traversed. The reference fails to disclose or suggest the claimed methods.

Ding et al. disclose engineered polyolefin materials with enhanced surface durability. See the Abstract.

The reference fails to disclose the combination of an unmodified polypropylene homopolymer (P1) and a modified propylene homopolymer (P2), modified by grafted acid and/or anhydride groups which are not neutralized, to improve (1) low-speed mechanical behavior, (2) operating temperature range, and/or (3) change in the mechanical behavior over time of a polyolefin composition, as specified in Claims 50, 56 and 62. In fact, Ding et al. fail to even suggest any improvement in those mechanical properties.

The reference teaches a only teaches a slight improvement in other properties (like Tensile Strength or TS) when changing from PP to a mixture of PP and grafted PP (comparison between examples 3 and 1), the most improvement in said property being obtained by adding a metal ion (comparison between the Control tests and the Examples).

The comparison between Control Example 1 and Example 3 is improper because Example 3 contains metal ion while Control Example 1 does not.

Regarding inherency, mere possibility is insufficient to establish inherency. Inherency requires (1) that an element that is not expressly disclosed in a prior art reference must necessarily be present in the reference and (2) that it would be so recognized by persons of ordinary skill. Rosco, Inc. v. Mirror Lite Co., 304 F.3d 1373, 1380 [64 USPQ2d 1676] (Fed. Cir. 2002). No evidence has been provided to support and argument that VanBrederode et al. inherently improve the mechanical properties specified in Claims 50-65.

Regarding product-by-process features, Applicants note that Claims 50-65 are directed to methods and not product-by-process.

In view of the foregoing, Ding et al. fail to disclose or suggest the claimed methods. Accordingly, Claims 50-65 are neither anticipated by nor obvious over Ding et al. Withdrawal of these grounds of rejection is respectfully requested.

The rejections of the claims under 35 U.S.C. §102(b)/§103(a) over VanBrederode et al. (U.S. 3,886,227) is respectfully traversed. The reference fails to disclose or suggest the claimed methods.

VanBrederode et al. disclose grafted polyolefins as modifiers for unmodified polyolefins. See the Abstract.

The reference fails to disclose the combination of an unmodified polypropylene homopolymer (P1) and a modified propylene homopolymer (P2), modified by grafted acid and/or anhydride groups which are not neutralized, to improve (1) low-speed mechanical behavior, (2) operating temperature range, and/or (3) change in the mechanical behavior over time of a polyolefin composition, as specified in Claims 50, 56 and 62. In fact, VanBrederode et al. fail to even suggest any improvement in those mechanical properties.

The reference teaches such a slight increase in TS in comparing E-115 and D540, and E117 and D541 respectively in Table III. Again, the Examiner makes an incorrect conclusion on incomparable examples when taking compositions A and B in Table IV, since those relate to glass fiber filled compositions.

Regarding inherency, mere possibility is insufficient to establish inherency. Inherency requires (1) that an element that is not expressly disclosed in a prior art reference must necessarily be present in the reference and (2) that it would be so recognized by persons of ordinary skill. Rosco, Inc. v. Mirror Lite Co., 304 F.3d 1373, 1380 [64 USPQ2d 1676] (Fed. Cir. 2002). No evidence has been provided to support and argument that VanBrederode et al. inherently improve the mechanical properties specified in Claims 50-65.

Regarding product-by-process features, Applicants note that Claims 50-65 are directed to methods and not product-by-process.

In view of the foregoing, VanBrederode et al. fail to disclose or suggest the claimed methods. Accordingly, Claims 50-65 are neither anticipated by nor obvious over VanBrederode et al. Withdrawal of these grounds of rejection is respectfully requested.

The rejections of the claims under 35 U.S.C. §102(b)/§103(a) over Mitsui Petrochemical is respectfully traversed. The reference fails to disclose or suggest the claimed methods.

Mitsui Petrochemical disclose multi-layered blow-molded bottles. See the see column 1, lines 10 and 11.

The reference fails to disclose the combination of an unmodified polypropylene homopolymer (P1) and a modified propylene homopolymer (P2), modified by grafted acid and/or anhydride groups which are not neutralized, to improve (1) low-speed mechanical behavior, (2) operating temperature range, and/or (3) change in the mechanical behavior over

time of a polyolefin composition, as specified in Claims 50, 56 and 62. In fact, Mitsui Petrochemical fail to even suggest any improvement in those mechanical properties.

The Examiner also misinterpreted the Examples of GB 1,335,791, where only Example 1 relates to PP blended with grafted PP. Example 2 relates to pure grafted PP and Comparative Example 1 to a blend of PP and PA! On the contrary, from that reference, it can be seen that the properties investigated (which are not those improved by the claimed method) are quite similar for pure grafted PP and grafted PP mixed with ungrafted PP. See Example 2 versus 1.

Regarding inherency, mere possibility is insufficient to establish inherency. Inherency requires (1) that an element that is not expressly disclosed in a prior art reference must necessarily be present in the reference and (2) that it would be so recognized by persons of ordinary skill. Rosco, Inc. v. Mirror Lite Co., 304 F.3d 1373, 1380 [64 USPQ2d 1676] (Fed. Cir. 2002). No evidence has been provided to support and argument that VanBrederode et al. inherently improve the mechanical properties specified in Claims 50-65.Regarding product-by-process features, Applicants note that Claims 50-65 are directed to methods and not product-by-process.

In view of the foregoing, Mitsui Petrochemical fail to disclose or suggest the claimed methods. Accordingly, Claims 50-65 are neither anticipated by nor obvious over Mitsui Petrochemical Withdrawal of these grounds of rejection is respectfully requested.

The rejections of the claims under 35 U.S.C. §102(b)/§103(a) over VanBrederode et al. (U.S. 3,966,845) is respectfully traversed. The reference fails to disclose or suggest the claimed methods.

VanBrederode et al. disclose acrylic acid grafted polyolefins as nucleating agents for ungrafted polyolefins. See the Abstract.

The reference fails to disclose the combination of an unmodified polypropylene homopolymer (P1) and a modified propylene homopolymer (P2), modified by grafted acid and/or anhydride groups which are not neutralized, to improve (1) low-speed mechanical behavior, (2) operating temperature range, and/or (3) change in the mechanical behavior over time of a polyolefin composition, as specified in Claims 50, 56 and 62. In fact, VanBrederode et al. fail to even suggest any improvement in those mechanical properties.

Regarding inherency, mere possibility is insufficient to establish inherency. Inherency requires (1) that an element that is not expressly disclosed in a prior art reference must necessarily be present in the reference and (2) that it would be so recognized by persons of ordinary skill. Rosco, Inc. v. Mirror Lite Co., 304 F.3d 1373, 1380 [64 USPQ2d 1676] (Fed. Cir. 2002). No evidence has been provided to support and argument that VanBrederode et al. inherently improve the mechanical properties specified in Claims 50-65.

Regarding product-by-process features, Applicants note that Claims 50-65 are directed to methods and not product-by-process.

In view of the foregoing, VanBrederode et al. fail to disclose or suggest the claimed methods. Accordingly, Claims 50-65 are neither anticipated by nor obvious over VanBrederode et al. Withdrawal of these grounds of rejection is respectfully requested.

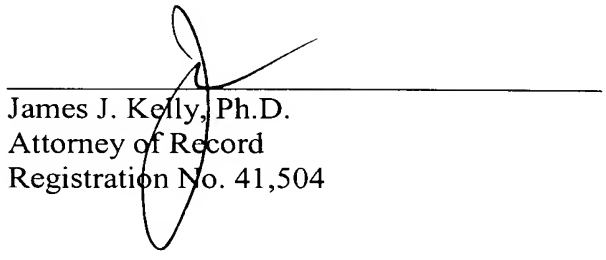
The rejection of the claims under 35 U.S.C. §112, first paragraph, is believed to be obviated by the amendment submitted above. The claims recite an unmodified polypropylene homopolymer (P1) and a propylene homopolymer (P2), modified by grafted acid and/or anhydride groups which are not neutralized. The specification provides detailed guidance for using those polymers to practice the claimed methods. Accordingly, Claims 50-65 are enabled. Withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §112, second paragraph, is believed to be obviated by the amendment submitted above. The claims have been drafted to clarify improvement of the mechanical properties in (a) and (b) in Claims 50, 56 and 62. In view of those amendments, Applicants submit that the claims are definite within the meaning of 35 U.S.C. §112, second paragraph. Withdrawal of this ground of rejection is respectfully requested.

Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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